

11.3.6 Desktop Computing Services

The Commonwealth Partners will provide services that not only meet the requirements as listed in the SOW, but package them in a solution with end-to-end coordination and fluid service delivery.

End User Services

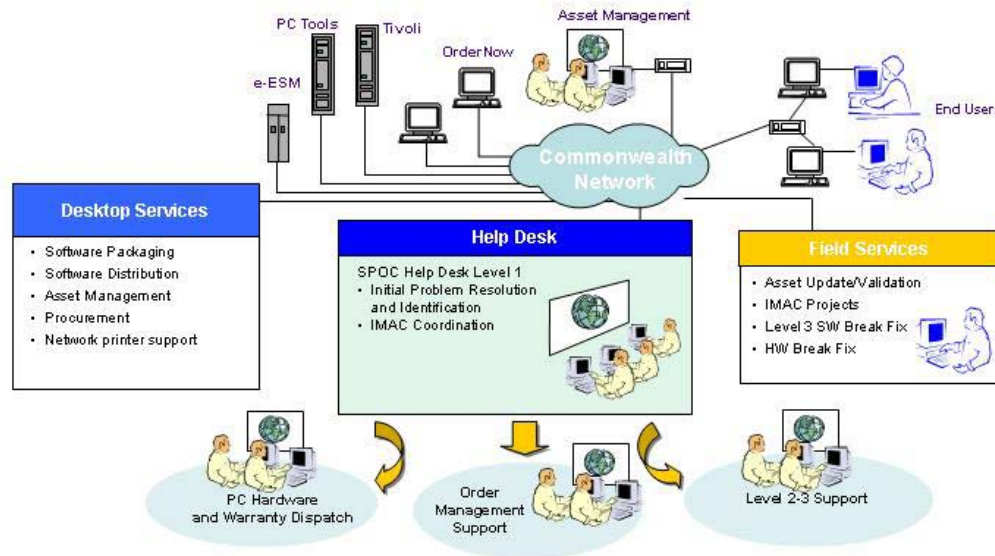


Figure 11.3.6-1. End-to-End Desktop Services for the Commonwealth of Virginia

Hardware and Software Acquisition

The Commonwealth Partners propose to implement a structured product acquisition service that leverages our procurement economies of scale, installs our well-developed acquisition self service tool (the *Order Now!* Web-based service), and assists the Commonwealth in taking control of desktop-related product acquisitions. During the transition, we will work with the Commonwealth to establish the processes and tools for acquisition, including *Order Now!* Other activities in support of the Commonwealth's product acquisition needs include:

- **Acquisition support.** This set of services includes managing the catalog, tracking and reporting order status, providing internal standard reports from the *Order Now!* database and external reports from other sources, providing analysis and reengineering of processes for productivity improvement, and coordinating inventory levels based on agreed reorder points.
- **Order placement.** This service includes obtaining and confirming quotes as well as actually placing orders, and also includes confirming the accuracy of requisition requests for both new orders and refreshes. We also perform a technical review to make sure ordered products are compatible with the existing technology and we manage large orders for special projects, coordinating the orders so that equipment and software arrive on schedule.

- **Invoice reconciliation, billing and accounts payable, receiving and shipping, and tools support.** The result of this process will be that the Commonwealth's desktop hardware and software orders will be valid, accurate, well- priced, and arrive on time. In addition, the process will prevent one-off or nonstandard acquisitions without approval, supporting the integrity of IT standards and infrastructure, and controlling acquisition expense while flexibly meeting business needs.

Receiving

This service provides shipping and receiving as well as disposal of IT assets. We are providing the Commonwealth with:

- **Receiving and shipping services.** This includes verifying packing slips against orders, handling physical order delivery and acceptance, asset tagging, and scanning bar codes. This also includes shipping tasks such as managing physical inventory returns to the warehouse.
- **Storage.** IBM takes responsibility for vendor management of storage facilities, including site preparation, security, inventory tracking, and inventory management within the storage area and physical inventory management.
- **Disposal.** This service includes creating a disposal plan, managing and identifying assets to be disposed of, pulling assets together to be sent for disposal, removing asset tags, and formatting disk drives to prevent loss of sensitive information. This service feeds the Asset Disposal Service noted under Asset Management.

Our approach to inventory handling enables adequate inventory to be maintained without overstock, protection of the inventory, and timely delivery of assets to meet the Commonwealth's needs.

Pre-Delivery Prep

Pre-Delivery Prep (PDP) and build services encompass large-scale replacement of existing desktops or setup of new desktops for a new work environment. We have designed our proposed approach to PDP and build to take advantage of the economies of scale and standardized processes available, and will provide these services at the PDP facility within the Commonwealth's data center facility.

Among the PDP services we provide are hardware configuration and base software image installation prior to delivering the hardware. We will be responsible for the build services, which include Commonwealth or agency-specific software requirements, configuration of user parameters, applying asset tags and updating the asset inventory, and testing.

This PDP process includes:

- Processing of appropriate inventories
- Configuration of hardware, installation of hardware options, setting CMOS and BIOS for motherboard and adapters
- Loading the "gold" master standard basic software image
- Testing, performing problem solving when appropriate, and shipment

During the build process, we will:

- Process inventory received from the equipment manufacturer
- Load, configure, and test standard software
- Configure network parameters, including ID and password setting
- Add agency-specific software
- Test completed workstations
- Perform asset tracking related tasks
- Migrate data onto new desktops
- Maintain database of what is loaded for each user

The result of our approach to PDP and build activities will be satisfied users up and running on the desktops they expect at the time they expect it. PDP and build processes also promote accurate tracking of assets and cost-effective standardization of desktops.

IMACs

Timely and accurate installations, moves, add, and changes (IMACs) are essential to maintaining high levels of user satisfaction and productivity. IMAC services for Intel-based desktops include:

- IMAC perform services
- IMAC coordination services

IMAC Coordination

The IMAC coordination services are integrated into the services provided by our help desk, enabling this help desk to provide a single point of contact for the End-Users with a seamless connectivity of services, as well as enabling further integration of services and towers.

IMAC Coordination Activities

At times, IMACs cannot be carried out on schedule, often because the user is not prepared, is not present, or had a conflicting schedule with in-process work. Sometimes the user is ready but approvals are not in place, preventing the IMAC from completing and leading to frustration and loss of productivity on the user's part. The IMAC coordination activities prevent these issues from arising. They include scheduling both the IMAC activity and the approvals so that the user is prepared for the IMAC when it occurs. IMACs can originate from either user requests or as a result of a mass change or reorganization. The coordinator attempts to schedule large projects to minimize disruption to ongoing work as well as consolidate multiple individual IMACs for efficiency and cost savings.

We will generate a monthly report of IMAC activity, including any changes still outstanding for discussion with the Commonwealth regarding priorities and strategies.

IMAC Perform Services

This component of IMAC services is the "hands on" tasks associated with IMACs. We refer to these as "activities," and they include:

- **Install**, encompassing setting up and connecting a new system unit at the desktop and capturing the asset, setting up and connecting peripherals, testing, and backup and restore of user data onto the unit from the server.
- **Move**, including testing and disconnecting system units and peripherals, preparing the unit for moving, moving and unpacking, setting up and testing at the new location, and disconnecting a current unit at the new location.
- **Hardware add**, which includes modifications for upgrades or downgrades, including device drivers, and installing and testing the unit for functionality and connectivity to a network.
- **Software change**, including modifying existing software, customizing and application load, and testing functionality and connectivity.
- **Remove**, including disconnection, packing, transport, erasing disk drives, and disposal.
- **Refresh**, which means replacing an existing desktop system with a new one, including electronic data migration, and moving the old system to a central location for disposal.
- **Cascade**, which means removing and replacing a system then moving the system that was replaced to a new user's desk. It includes migration of the data, as well.

Asset Management

Helping the Commonwealth to understand exactly what assets you have, implementing effective management processes and tools, and laying the foundation for long-term control are the key goals of our approach to meeting the Commonwealth's asset management requirements. Effective asset management includes the processes and tracking databases required to manage assets, from acquisition to disposal. It also includes accurately documenting changes in definition, status, location, value, or ownership.

Our approach will:

- Establish an environment characterized by consistency, currency, timely refresh, and cost-effective control of hardware and software assets.
- Support the desktop services, such as IMAC and deskside support, in an effective manner. When a Commonwealth user initiates an IMAC request or a service call, effective asset tracking will place their equipment information at our fingertips.

We propose a full-scope asset management approach for all of the assets provided by and owned by the Commonwealth partners, and asset tracking for the in scope assets that are owned by the Commonwealth, that includes the key elements in the following table.

Elements of Our Solution	How the Commonwealth Benefits
Inventory capture services – tools, techniques, knowledgeable staff	<ul style="list-style-type: none"> • Thorough, accurate view of what you own.
Hardware and software asset administration	<ul style="list-style-type: none"> • Supports the ability to perform IMAC and deskside support – enhancing user productivity and satisfaction.
Product acquisition process with enforced policies	<ul style="list-style-type: none"> • Reduces costs by leveraging relationships with vendors that either the Commonwealth or IBM has already established. • Eliminates one-off, non-tracked, or unauthorized acquisitions.
Inventory handling process and automated tools	<ul style="list-style-type: none"> • Makes sure assets arrive where and when a Commonwealth user needs them.
Software license management for software assets owned by the Commonwealth Partners	<ul style="list-style-type: none"> • Enhances user productivity and satisfaction through correct number of licenses. • Supports audit requirements. • Helps forecast future needs.
Hardware financial management for the assets owned by the Commonwealth Partners	<ul style="list-style-type: none"> • Establishes and tracks the value of assets in the Commonwealth's agencies. • Provides accurate data for decision-making by Commonwealth, VITA, or agency executives.
Transition and transformation – proven tools and methodologies and experienced staff	<ul style="list-style-type: none"> • Controls risk. • Meets timeliness requirements.
Asset Disposal	<ul style="list-style-type: none"> • Provides a secure and environmentally friendly disposition of computing assets at end of life • Ensures complete data erasure of all fixed media

The Commonwealth Partners propose to transition and transform the Commonwealth's asset management environment. Our proven transition and transformation approaches integrate the Commonwealth's needs, tools, and processes with our own recommended tools and processes to deliver steady-state operations that will meet the Commonwealth's expectations. Figure 11.3.6-2 illustrates our proposed asset management approach.

Asset Management Overview

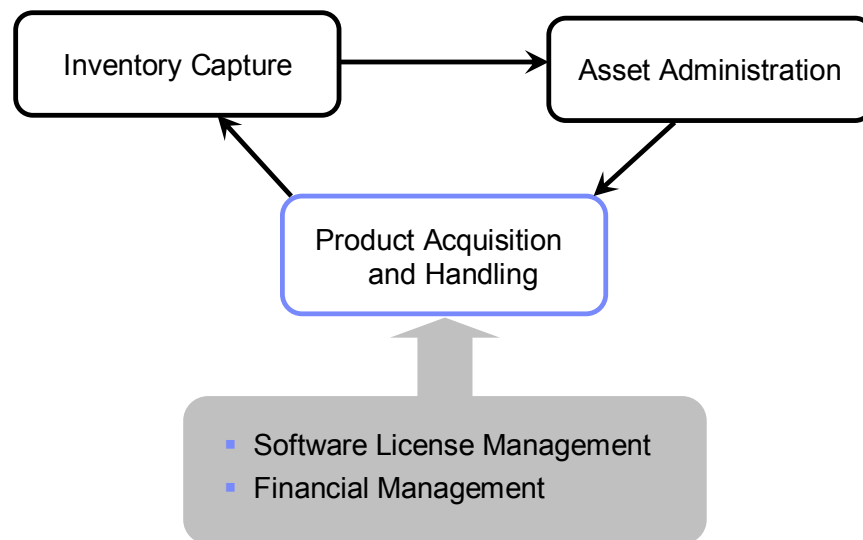


Figure 11.3.6-2 IBM Asset Management for the Commonwealth of Virginia

Our approach will result in a thorough inventory methodology, consistent asset administration, and timely, cost-effective product acquisition and handling, supported by software license administration and financial management of the Commonwealth's assets.

Asset Tracking

A single asset repository will be used by all of the services, enabling an integration of services and facilitating a coordination of services. This database will be part of and fully integrated with the suite of tools we will use to manage the Commonwealth's IT environment.

The asset database is kept current through several checks and feedback paths. Assets are tracked through the receiving and the IMAC services. Asset information is checked when calls are placed to the Help Desk. Asset information is verified when a technician visits an End-User location for software, hardware, or IMAC services. All of these service processes include a link to the change management process through which the asset database can be updated.

Asset Disposal

The disposition of obsolete information technology has become a major issue for U.S. companies. According to the National Safety Council, in excess of 315 million PCs are estimated to become obsolete by 2004. And few units are ever recycled; the same group reports that for every PC recycled in 1998, more than 16 new units were sold. International Data Corporation estimates that most corporations store old computer equipment for up to three years at a cost of \$360 per machine, and then pay an additional \$218 for its eventual disposal. In the face of these statistics, it's clear that you face real challenges every time you upgrade your IT equipment. You want to

minimize disposal costs at every opportunity. Disposal methods must comply with environmental requirements.

We will dispose of your IT and IT-related hardware, faxes and printers. Our methods ensure safe and proper processing of used equipment. This service includes the packaging and shipment of the equipment, hard drive erasure (overwrite) in accordance with the Commonwealth's security requirements and environmentally friendly disposition of these assets. IBM has been a world leader in environmentally responsible industrial practices since 1967, with the establishment of its Office of Environmental Affairs and the publication of its first formal commitment to environmental stewardship. This disposal service provides for the disposal of hazardous materials utilizing highly qualified and regularly audited subcontractors who specialize in this complex field. Fully documented for ISO 14001 compliance, these vendors ultimately assure you that hazardous materials from your returned computers will not enter the biosphere.

Software License Management

Software license management merges physical, financial, and contractual attributes of software to enable full management of licenses. This will enable the Commonwealth to maintain the correct number of software licenses needed to meet business needs, as well as honor business contracts and keep accurate data for potential audit requirements. During the transition, the Commonwealth Partners will form the appropriate teams to design and deploy the software asset management infrastructure along with the full and integrated suite of IT management tools that will support all of the towers of this proposal.

The Software License Management process includes the following capabilities:

- Developing jointly with the Commonwealth, the software license control policies and strategies
- Developing software license administration
- Establishing jointly with the Commonwealth, the software license baseline
- Auditing software license compliance
- Reporting on and addressing software compliance exceptions
- Distributing and recording software licenses
- Administering maintenance and support of software license agreements (including acting on expiration schedules and obtaining quotes)
- Analyzing the Commonwealth environment for cost reducing opportunities

During the steady-state operations, we will administer software license management. We will:

- Maintain a listing of software products within scope of Software License Management
- Provide requests for changes in software inventory via Change Management process
- Validate request is in scope
- Check current license pool for unused licenses
- Receive and normalize ongoing license acquisition information from product acquisition, as proof of license
- Receive and normalize software installed data and reconcile unknown product files to the software product listing and make sure changes to these data are captured correctly

- Maintain a software license repository and license management infrastructure to reflect the current software environment
- Give advice on the development of methodologies to procure additional licenses as required to leverage volume purchasing capability
- Provide license discrepancy and software reports, including:
 - Authorized vs. installed software
 - Unauthorized software
 - OS software
 - Maintenance renewals
 - Compliance reporting
- Provide access to system units for which software must be tracked in order to perform software inventory and grant access for regular inventory scans and audits during the life of the contract
- Provide ownership of the overall software license management process and provide management of in-scope license data
- Administer license, maintenance, and support agreements
- Perform software inventory of the supported environment using electronic gathering tools and implement manual collection processes for “non-scanable” assets

The Commonwealth Partners will provide full Software License Management services for all of the software owned by us. We will also provide a robust software license tracking for the in scope software assets owned by the Commonwealth. Software License Management and Software Licenses Tracking are part of the Asset Management and Tracking services being proposed here. Both the tools and the methods are integrated with the other tools and services of this technical solution.

Deskside Support

There are few more frustrating problems to users than “my computer is down” and the solution isn’t obvious or easily solvable by the Help Desk. Users become frustrated and productivity stops. When the user has called or otherwise contacted the Help Desk, and the customer service representative cannot resolve the problem remotely, then deskside support is engaged. Deskside support is direct one-on-one support for users and is provided when the Help Desk cannot resolve the problem remotely.

We refer to the first level of deskside support as the Centralized Technical Support (CTS), kind of a “Level 1.5” Help Desk, which engages the advanced skills and training of the deskside support team, but is still provided to users remotely rather than at the End-User location. Level 2 deskside support is one-on-one support provided at the End-User’s location, which would be engaged if the CTS did not resolve a problem remotely.

For the Commonwealth, our deskside support services encompass:

- Diagnostics and consulting for hardware, software, and network problem determination
- Software technical support

- Support from the Centralized Technical Support (CTS) deskside support group or by dispatching Decentralized Technical Support (DTS) technicians to the user deskside (Level 2)

The use of a remote service, CTS means a very high percentage of End-Users back in service without having to wait for a technician to be dispatched to their location.

Our deskside services include:

- Identifying and fixing problems, including software break/fix
- Supporting desktop standard products, as agreed between the Commonwealth and the Commonwealth Partners
- Tracking services provided, updating asset database when needed, and generating reports of deskside activity
- Providing VIP support as agreed with the Commonwealth
- Meeting off-hours service requirements and backup or restore service requirements

Data Integrity

Part of the technical solution for the desktop environment is that data files will be backed up to a file server. These servers are backed up to other media for business continuity purposes. In the event of a system change (e.g., system refresh) or a system failure (hardware or software) that would compromise desktop data, that data continues to be available, or recoverable, because of this back up and recovery service.

Electronic Software Distribution

Electronic software distribution is the deployment of initial core and standard desktop software packages as well as ongoing software maintenance and upgrades. Initial images or “gold loads” include operation system, network protocols, hardware drivers, and a small core set of applications. Standard software packaging and distribution includes the applications needed for the Commonwealth to meet its business requirements, including operating system patches, commercial programs such as Windows, and custom applications.

Initial system imaging occurs during the build process and is specific to each hardware model because hardware drivers are different. We propose to update system images as agreed between the Commonwealth and the Commonwealth Partners. Our approach to software packaging and distribution is to “push” the packages to the user desktop electronically when standard upgrades or changes are required.

For the Commonwealth, we propose to provide each desktop with the Microsoft XP operating system as the systems are being refreshed. We also propose the following standard desktop software to be provided by the Commonwealth and installed on systems in accordance with End-User or system (for shared systems) profile:

- Microsoft Office
- Microsoft Project
- Microsoft Visio
- Adobe Acrobat

A base system, including Microsoft Windows XP and Symantec Anti-virus will be loaded onto every system. We will load productivity software and custom applications in accordance with the End-User profile. This approach will reduce expense to the Commonwealth by not loading software that would not be used in a particular installation. For example, if a system is not going to be attached to the network, loading the network communications software would only serve to make the system more expensive, not more usable.

To minimize errors and maximize productivity for users, we will carry out the following system imaging activities:

- Work with the Commonwealth to confirm requirements
- Build and test the core image and define customization packages to be provided for specific sites or functional groups
- Provide core images to the PDP team, build deployment and re-imaging infrastructures, update the images periodically, and conduct acceptance testing
- Provide operating system upgrades and advanced data migration

To meet changing ongoing business needs, we propose to carry out the following standard software distribution activities:

- Confirm with the Commonwealth, the software configuration requirements and conduct acceptance reviews with the Commonwealth of each application package prior to deployment
- Schedule software maintenance to meet requirements, establish a software distribution plan for each package in coordination with the Commonwealth's focal point, identify any prerequisites for making the change, and recommend to the Commonwealth, any user training that may be needed
- Package and test software packages by building a simulated Commonwealth or agency environment and conducting pilot tests if needed
- Distribute software to network attached clients according to the agreed schedule, apply updates as agreed, validate successful completion of distribution process, and distribute manually if required
- Provide the Commonwealth a list of failed loads and work with the Commonwealth to resolve issues
- Provide ongoing reporting

Hardware Break / Fix

The Commonwealth Partners will provide hardware repair services for the in scope desktop hardware and network printers, copiers, and multi-function devices. We will provide on site service as well as depot services in the Commonwealth.

The Commonwealth will realize the desktop system availability so critical to your success and to meeting your stated objectives by selecting the Commonwealth Partners to provide hardware support services for your desktop environment. We recognize that your choice of a technology partner can directly affect the Commonwealth's ability to meet its business goals.

What's more, the Commonwealth Partners continues to build strong alliances with IT service leaders such as Halifax to provide you with single-point-of-contact services, including warranty coverage of other equipment manufacturers' products. The Commonwealth Partners will not only

leverage the existing relationship between the Commonwealth and Halifax, we will extend that to the provision of repair services for agencies that do not yet use Halifax services. Equally important is our commitment to covering new technologies. Our alliance building strategy means you can rely on us to meet your present and future services requirements — no matter what equipment you choose to deploy. We are committed to delivering consistent services of the highest quality on a wide range of multi-vendor products.

Desktop Refresh

The Commonwealth Partners will provide desktop and laptop devices and their peripheral devices in accordance with the refresh schedule delineated in the SOW issued by the Commonwealth: Thirty percent of the systems will be refreshed on a four-year cycle; sixty percent of the systems will be refreshed on a five-year cycle and ten percent of the systems will have no specified refresh cycle, but will be refreshed as requested. We will manage the existing desktop and laptop devices until they are due for refresh and, at that time, replace those existing devices with the then current Commonwealth standard devices.

Network Printer Refresh

The Commonwealth Partners will provide network printing devices, including the network printers, copiers, and multifunction devices, in accordance with the refresh schedule delineated in the SOW issued by the Commonwealth (i.e., five-year refresh cycle). We will manage the existing devices until they are due for refresh and, at that time, replace those existing devices with “IP-addressable” devices to improve performance, reduce cost, reduce the dependency on, as well as the cost of, print servers.